

## ABSTRACT

In the case where transmission and reception is made impossible at a certain portion, a data transmission system  
5 configured in a ring LAN performs an initialization process for a physical layer(a transmission/reception section 4) repeatedly, thereby setting as a master a data transmission device which is located most upstream in electrical communication from a disconnection point. With that data transmission device being  
10 the master, an initial setting of the physical layer such as a clock synchronization with another data transmission device or the like is established, and an initialization process for a data link layer is performed, whereby subsequent data transmission and reception is enabled. That is, the data transmission system  
15 configured in a ring LAN is able to perform communication using transmission lines excluding a damaged point even in the case where transmission and reception is made impossible at a certain portion.